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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,689	12/27/2001	Helene Lagace	66526 CCD	7290

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[REDACTED] EXAMINER

COMBS, JANELL A

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 08/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/032,689	LAGACE, HELENE
	Examiner Janelle Combs-Morillo	Art Unit 1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 27 December 2001.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) 9 and 10 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 6.      6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10, drawn to method of controlled cooling of metal strip, classified in class 148, subclass 511.
  - II. Claims 11-16, drawn to a system for controlled cooling, classified in class 266, subclass various.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used to practice a materially different process such as controlled cooling of plastics, etc.
3. During a telephone conversation with Christopher Dunham on April 4, 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-159127A (JP'127) in view of Sellitto et al (US 4,913,748).

JP'127 teaches a method of controlling the temperature of a metal strip in a continuous annealing facility by passing hot, heat treated strip (translation p 6 line 8) around one to multiple rolls while changing the contact length of said rolls with the strip in order to obtain a desired strip temperature. The rollers in Fig. 1 of JP'127 qualify as "spaced apart rolls". In order to carefully control the temperature, feedback and feedforward methods are used so that cooling precision is improved (translation pages 9-10). Said feedback and feedforward methods include measuring the temperature at the inlet and outlet points and storing information including the strip size and property values in order to calculate and control a desired cooling rate (translation pages 9-10). JP'127 does not teach a) exposing the metal strip to ambient cooling air while traveling between said space apart rolls, or b) coiling after said process of controlled cooling.

Concerning item a), JP'127 does not teach a special atmosphere or heating condition, and therefore is held to imply that the metal strip is not subjected to heating, cooling, or a special

atmosphere when traveling between spaced apart rolls. Therefore, the strip is subject to ambient cooling air when traveling between spaced apart rolls.

Concerning item b), Sellitto teaches that it is conventional to recoil strip metal after subjection to a continuous annealing process (column 3 lines 20-24, 62-63, Fig. 1 #32). It would have been obvious to one of ordinary skill in the art to perform a step of coiling (as taught by Sellitto) after the continuous heat treatment process of controlled cooling (taught by JP'127), in order to provide sheet stock in a conventional compact coil form.

Concerning dependent claims 2 and 3, as stated above, JP'127 teaches both feedback (instant claim 2) and feedforward (instant claim 3) methods of sensing temperature conditions and sending said conditions to a controller (translation pages 8-9).

Concerning dependent claims 4 and 5, JP'127 teaches the capturing of values of strip width, thickness, and travel speed (instant claim 4), as well as roller pressure, roller temperature, and heat transfer coefficient (instant claim 5), see translation pages 11 and 14.

Concerning dependent claim 6, JP'127 does not teach aluminum can be used as the metal strip. However, because the method of controlled cooling taught by JP'127 is determined by calculating the amount of heat discharged from the metal strip ( $\Delta q_1$ ) and the amount of heat flowing to a refrigerant from the metal strip ( $\Delta q_2$ ) in terms of material properties that define and are specific to that metal (specific heat, specific gravity, coefficient of heat transmission), it would have been obvious to one of ordinary skill in the art to perform the process taught by JP'127 on other metals (including aluminum), and said process could be performed with expected success.

Concerning dependent claim 7, as stated above, JP'127 teaches spaced apart rows of rollers (#2 and #4, see Fig. 1), that are varied in distance by hydraulic cylinders (#10).

Concerning dependent claim 8, JP'127 teaches a typical thickness is 0.8 mm or 1.0 mm (translation page 6).

***Allowable Subject Matter***

7. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest a process of controlled cooling an aluminum alloy strip (substantially as set forth in independent claim 1 together with claims 2, 3, 6, and 8), wherein the strip travels at the instant speed (dependent claim 9) or has the instant temperature profile (dependent claim 10).

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs- Morillo whose telephone number is (703) 308-4757. The examiner can normally be reached Monday through Friday from 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (703) 308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Art Unit: 1742

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER

jcm 

August 14, 2003